

# ***Analysis of State of Missouri Email Consolidation Report***

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***11 February 2004***



# ***State of Missouri Basics***

<b>■</b>	<b>% of Users</b>	<b># of Users</b>
<b>▲ Lotus Domino</b>	<b>31%</b>	<b>14,451</b>
<b>▲ Msft Exchange</b>	<b>45%</b>	<b>20,919</b>
<b>▲ Novell Groupwise</b>	<b>11%</b>	<b>5,336</b>
<b>▲ Other</b>	<b>14%</b>	<b>6,471</b>

- ▲ 308 total email servers in 30 agencies**
- ▲ 47,168 total users**
- ▲ Rounding errors in percentages**
- ▲ EDG used to refer to Exchange, Domino (Notes) and Groupwise**

# ***Centralization Realities***

- ▶ **Most commercial organizations have moved to single vendor hybrid/centralized architecture and have reaped benefits from:**
  - ▶ **Standardized environment: all users have same functionality, high degree of interoperability**
  - ▶ **Administration can manage entire system creating personnel efficiencies**
  - ▶ **Common engine for setting common policy for mail controls, hygiene and user guidelines**
  - ▶ **Savings on server consolidation**
  - ▶ **Savings on migration planning/testing/deployment and training**
  - ▶ **Savings on procurement and maintenance**
  - ▶ **Reduction in system complexity**
- ▶ **Most States are in the same position as the State of Missouri**

# ***Migration Realities***

- ▶ **Mail migrations are painful, resource intensive, expensive and should not be taken lightly**
- ▶ **Biggest headaches are staff retraining, data migration, user retraining, client deployment and transition effort**
- ▶ **In the State, 78% of email servers have dual purposes so no large scale elimination of servers is anticipated**
- ▶ **Current FTE load is light: one FTE per 2193 users (assumes help desk), only slightly below our best practice number of 2,500:1 for a largely centralized single vendor implementation**
- ▶ **Not a lot of interaction between agencies**
- ▶ **Systems are largely stable (but aging presumably)**
- ▶ **Domino and Groupwise used beyond email**

# ***Comments on Current Plan: Calendar Standards***

- ▶ **Report assumes that calendar standards will be mature enough for full-fledged interoperability**
- ▶ **The asynchronous components for creating and object (ICAL), passing the object (ITIP) and embedding the object in MIME (IMIP) are all ratified, but true interoperability is 12-18 months away.**
- ▶ **However, CAP, a mechanism for realtime communication (for free and busy lookups) is not ratified and is 24-36 months away from real deployment (client-side implementation is causing fits). Microsoft not yet committed to CAP.**
- ▶ **Bottom Line: Calendar standards for object passing are real but will require standardization and client upgrades. Realtime functionality is much further out.**

# ***Comments on Current Plan: Centralized LDAP Directory***

- ▲ **Who is the vendor?**
- ▲ **Is participation mandatory?**
- ▲ **Is synchronization with email directories the goal, with state-wide look-up lists?**
- ▲ **Or is it more of a intranet directory for users to browse to find the appropriate address?**
  
- ▲ **Contact Earl Perkins at META Group for assistance**

# ***Domino Applications***

- ▶ **Depending on the nature of the application, Domino applications can be very hard to replace**
- ▶ **Furthermore, Domino is unique in its ability to quickly produce routing and tracking applications**
- ▶ **META concurs that supporting Domino applications creates efficiencies in running a Domino email system**
- ▶ **But: Domino is aging technology and will evolve into IBM Webshere Portal Server, DB2 and Tivoli, requiring deep thinking at the State level about future infrastructure investments**

## ***Vendor Review: IBM***

- ▲ **Domino is solidly behind Exchange with about 65m seats**
- ▲ **Most organizations broadly deploy applications along with messaging**
- ▲ **Domino, however, is 15-year old technology and IBM is making some dramatic changes**
- ▲ **Most new, real functionality improvements stop with the 7.0 version next year**
- ▲ **IBM intends to move base over to Websphere Portal Server, DB2 and Tivoli (the Workplace Strategy)**
- ▲ **But, Domino will continue to be supported through the end of the decade**

## ***Vendor Review: Novell***

- ▶ **Groupwise base is about 30m seats, holding its own in market, but not expanding share**
- ▶ **Novell likely to continue to upgrade client and server for next several years**
- ▶ **But acquisition of Ximian Evolution client may alter strategy**
- ▶ **And acquisition of SUSE Open Exchange likely to push email and collaboration strategy heavily towards Linux orientation**
- ▶ **Novell likely to merge diverse efforts (including Netmail) over several years, but integration and progress will be slow and unsteady**
- ▶ **Of the three, most likely candidate for elimination**

## ***Vendor Review: Microsoft***

- ▶ **Exchange by far the most popular commercial email system with about 130m users**
- ▶ **Exchange now stripped to its core email functionality**
- ▶ **Only major development over next two years is introduction of an email hygiene server**
- ▶ **Major migration occurs in 2007 with a move to SQL Server as the core message store, and to the Longhorn operating system**
- ▶ **Exchange has most momentum in industry, but half the installed base still using 5.5.**

# ***Alternative Strategies: Divorcing Client from Server Strategies***

- ▶ **Both Domino and Groupwise allow Outlook to work against their respective backends**
- ▶ **State presumably has rights to Outlook already.**
- ▶ **Why: sets the stage for eventual Exchange migration, allows help desk and operational efficiencies at the client**
- ▶ **Why not? Set the stage for eventual Exchange migration, functionality drop out**

# ***Alternative Strategies: Architectural Options***

- ▶ **Report looks at two options for email architectures:**
  - ▶ **Fully distributed**
  - ▶ **Fully centralized**
- ▶ **There is a third option: a hybrid architecture**
  - ▶ **Under this model, all servers stay with local agencies, but are administered over the wire by a central email staff.**
  - ▶ **Advantages include local performance, staffing efficiencies, standardization, no additional network resources needed**
  - ▶ **But: Model works best with homogenous environment. Perhaps try it with one mail system only**
  - ▶ **Perhaps a proof-of-concept or first step towards centralization**

# ***Alternative Strategies: Agencies Encouraged to go to EDG.***

- ▶ **Report states that any agency not on one of the three main email systems should migrate to one of them the next time they upgrade**
- ▶ **META suggests that the State consider designating one or two email systems as primary, to which all non EDG mail systems should migrate, and to which the left out vendor would eventually migrate to.**
- ▶ **Why? Slowly moves State to one or two one email systems in the long term event that a centralized service model is more appropriate.**
- ▶ **META would prefer to see one designated vendor, as opposed to two.**
- ▶ **META will also be recommending phase-out of Groupwise**

## ***Alternative Strategies: Dealing with Smaller Agencies or those with Limited Resources***

- ▲ **Might consider a POP/IMAP/HTTP centralized implementation that uses the Internet for transport**
- ▲ **This could be based on Exchange or a commodity mail server**
- ▲ **Good opportunity to trial a low cost, lower functionality email system in a centralized offering**

# ***Alternative Strategies: Goal Should be Standardization and Cost Elimination Within Agencies***

- ▲ **Each agency with common mail systems can look at internal cost savings activities, guided by a central body (e.g., server consolidation, license review, personnel efficiencies, perhaps standardizing on versions and have centralized testing, etc., help desk.**
- ▲ **Represents a half step before any migration activity**

## ***Other Aspects: Mail Hygiene and SMTP strategies***

- ▶ **Assumption is that each agency handles own SMTP services (including relays, virus, spam and content blocking)**
- ▶ **Possibility to centralize all SMTP resources and then distribute email downstream**
- ▶ **Why? Can create state-wide policies, create economies for hardware and software**
- ▶ **Create possibility to move to hosted model**
- ▶ **But: individual agencies may have unique requirements here**
- ▶ **But: does create seeds of centralized approach**

## ***Other Aspects: Collaboration Evolution***

- ▶ **State may want to consider a second generation of collaboration on which they can standardize on from the start:**
  - Instant messaging
  - Teamware
  - Web conferencing
- ▶ **But this is complicated by investments in EDG, which supply much of the infrastructure required by these next-gen collaboration tools**
- ▶ **Question: How much cross agency collaboration is needed now and in the future?**

# ***Migration Scenario: Groupwise and Other to Exchange***

	<b>% of Users</b>	<b># of Users</b>
■		
▲ Lotus Domino	<b>31%</b>	<b>14,451</b>
▲ Msft Exchange	<b>45%</b>	<b>20,919</b>
▲ Novell Groupwise	<b>11%</b>	<b>5,336</b>
▲ Other	<b>13%</b>	<b>6,471</b>
▲ Becomes (in 2-5 years)		
▲ Lotus Domino	<b>30%</b>	<b>14,451</b>
▲ Msft Exchange	<b>70%</b>	<b>34,726</b>
▲ Total users		<b>47,167</b>
▲ *some rounding errors--	<b>% approximate</b>	

# ***Discussion on Migration Scenario***

- ▶ **Why Exchange, not Domino?**
  - ▶ **45% versus 31%**
  - ▶ **Domino upgrades few and far between, emphasis is on Websphere ecosystem**
  - ▶ **But: Domino is fine if State is moving in Websphere direction**
- ▶ **Exchange direction is much clearer, but it is email only and does require substantial Microsoft infrastructure investment**
- ▶ **With Exchange and Domino, State can use more highly functional Microsoft gateway for email, directory and calendar between systems (Exchange Connector for Lotus Notes)**
- ▶ **Two systems means easier for State to roll-out single vendor for instant messaging, web conferencing and teamware**
- ▶ **Longer term, Domino applications can be minimized, moved to the web, and have Exchange as State-wide email system**

# ***Discussion on Migration Scenario***

- ▶ **A half step between one system and many systems**
- ▶ **Why Groupwise? Smallest share of State, probably least current, smallest share of large mail suppliers. Probably mostly mail and calendar**
- ▶ **Migration is done only when systems are unstable or facing large-scale upgrade**
- ▶ **State sets goal of 2-5 years to get to two platforms**
- ▶ **Perhaps some users/agencies are provided with HTTP access only for Exchange mail and calendar**
- ▶ **State can elect to run servers locally, centrally or in a hybrid fashion.**

## ***Bottom Line Conclusions***

- ▶ **META agrees with the conclusion that a migration to consolidated, single vendor architecture is inappropriate at this time. The business benefit is not apparent and the migration costs substantial.**
- ▶ **However, greater activity to create efficiencies within the EDG is possible: documentation of versions and upgrade cycles is desirable, and sharing of best practices and creating communities of interest to reduce redundant effort (e.g., testing)**
- ▶ **This could lead to some management efficiencies (via standard testing, upgrade practices, etc.) and perhaps some limited application of a hybrid model**
- ▶ **The State should consolidate down to two email systems, over 2-5 years. Groupwise is the most likely candidate for elimination**
- ▶ **A central LDAP directory providing common directory services is desirable. Question is a directory look up, or integrated into the mail system itself.**

## ***Bottom Line Conclusions***

- ▶ **Full-fledged calendar interoperability with realtime free and busy look up is years away**
- ▶ **State might consider centralizing SMTP resources for common mail hygiene policy**
- ▶ **State should contemplate one vendor for supplying instant messaging, web conferencing and teamware to prevent a similar multi-vendor approach from emerging.**
- ▶ **Agencies with limited resources could be moved to a lower cost HTTP email service run centrally**
- ▶ **State can experiment with centralized or hybrid architectures with in individual mail systems**
- ▶ **Standardizing on Outlook as a common client is an option, but not necessarily practical at this time**